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ABSTRACT

During the fall and spring, 20-24 high school students volunteer as Junior Counselors at the Outdoor School, which provides approximately 7,000 Multnomah County (Oregon) sixth grade students with an opportunity to live and study at 1 of 5 leased resident camp sites. Junior Counselors are recommended by their high school counselors and selected by the Outdoor School staff. After a 2-day training workshop, Junior Counselors are specifically responsible for the health and welfare of a cabin group of students during their week-long stay. This handbook briefly describes the Outdoor School; the staff personnel; and the selection, qualifications, responsibilities, and evaluation of Junior Counselors. Information is provided on the policies pertaining to Junior Counselors; classroom and site visitations; permission forms; insurance; table manners; duty stations; rules for the Outdoor School; and health, safety, and emergency procedures for Junior Counselors. The handbook includes a clothing and equipment list; busing schedule; all-site map; directions to Outdoor School sites; daily schedule; suggestions for things to make, how to make the cabin a home, child management, moving children, and cabin-time activities; hints for discipline; a 74-item suggested reading list; and glossaries of terms used in animal study and of plant, soil and water words. (NQA)

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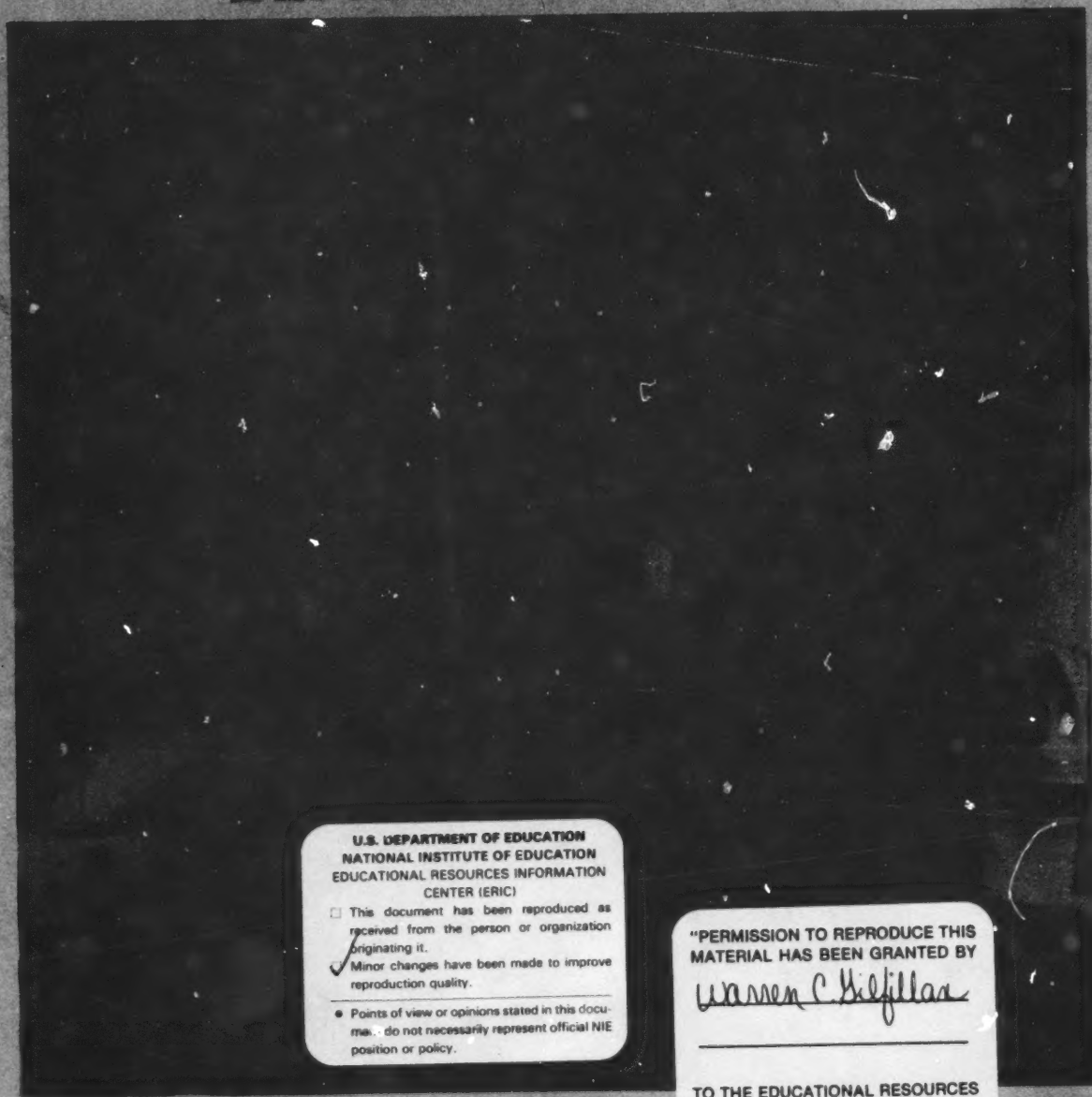
THE JUNIOR COUNSELOR HANDBOOK



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FOR MULTNOMAH COUNTY OUTDOOR SCHOOL

RC018748

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THE JUNIOR COUNSELOR HANDBOOK FOR MULTNOMAH COUNTY OUTDOOR SCHOOL

Developed By:

Diane R. Millemann, Junior Counselor Specialist

Multnomah Environmental Education..... A Service Of:
220 SE 102nd Avenue
PO Box 16657
Portland, OR 97216

Multnomah County
Education Service District

Allan J. Thede, Superintendent

Warren C. Gilfillan, Operations Coordinator
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Cover Photo By: Daniel Stanton

ADDRESSES OF OUTDOOR SCHOOL SITES

Colton
PO Box 116
Colton, OR 97017

Arrah Wanna
PO Box 186
Wemme, OR 97067

Adams
18798 So. Hwy. #211
Molalla, OR 97038

Collins
Route #2, Box 577
Gresham, OR 97030

Howard
Route #1, Box 808
Corbett, OR 97019

JANUARY 1981

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WHAT IS OUTDOOR SCHOOL?

Outdoor School is a residential program for all sixth grade students enrolled in Multnomah County (approximately 7,000 annually). The Multnomah County Education Service District provides this service for the 12 school districts in the county.

Outdoor School operates 5 sites during the fall and spring of each school year. They are all located within approximately a one hour drive from Portland and a map of their locations is included. Outdoor School sites are owned by church groups or youth organizations and are leased by Multnomah Outdoor Education for the period of Outdoor School only. Each site has four sixth grade classes each week who spend from 4:00 p.m. Sunday through 12:30 p.m. Friday living and studying together.

1 Site Supervisor
4 Resource Specialists
6 Senior Counselors
20-24 Junior Counselors
4 Sixth Grade Classes
4 Teachers Of The Four Classes
1 Registered Nurse
1 Head Cook
5 Kitchen Helpers

STAFF PERSONNEL

Following is a brief description of staff personnel:

SITE SUPERVISOR:	Has total responsibility for operation of the site and makes the final decision in areas of conflict.
RESOURCE SPECIALISTS:	Cooperatively responsible with teachers for implementing the curriculum pertaining to their area of natural resource study.
SENIOR COUNSELORS:	Responsible for working with Junior Counselors to insure a successful experience for them and their cabin groups. Responsible to see that all scheduled program activities are carried out. Responsible for assisting a Resource Specialist in natural resource study.
CLASSROOM TEACHERS:	Ultimately responsible for the conduct and discipline of the youngsters in their class. Cooperate and participate in all phases of the program.
REGISTERED NURSE:	Responsible for health and welfare of each student and staff member. Responsible for checking site facilities and staff practices for high health standards.
HEAD COOK AND KITCHEN HELPERS:	Responsible for supplying a balanced and adequate diet for all persons attending Outdoor School.

DESCRIPTION OF JUNIOR COUNSELOR POSITION (High School Student - Volunteer)

QUALIFICATIONS

1. Ability to communicate with sixth graders, classroom teachers, Outdoor School personnel, and peer group.
2. Exhibits enthusiasm, maturity, responsibility, flexibility, initiative, and leadership.
3. Enjoys the out-of-doors.
4. Recommendation of the high school counselor.
5. Passing grades, good attendance record, completion of all homework.
6. Desire to work with young people.

RESPONSIBLE TO:

1. Senior Counselors directly and ultimately to the Site Supervisor.

SPECIFIC RESPONSIBILITIES:

1. Assume responsibility for the health and welfare of a cabin group.
2. Assist as an instructor for one of the resource areas.
3. Aid the sixth grader in all phases of the Outdoor School program and personal relationships.
4. Maintain open communication channels with Outdoor School personnel and classroom teachers.
5. Seek assistance when needed.

EVALUATION:

1. At conclusion of week of counseling by Senior Counselors on cabin performance, and
2. By Resource Specialist on teaching performance.

SELECTION OF JUNIOR COUNSELORS

At each high school a staff member(s) has been designated as Outdoor School's primary contact person. Information from the Multnomah Outdoor Education office is sent through this contact who may in turn pass it on to other faculty members. Initial selection of Junior Counselors is the responsibility of the high school contact(s). The degree to which you are screened by the high school personnel will vary from school to school, however, passing grades, completion of all homework, and a good attendance record are prerequisites for all students wishing to become Junior Counselors.

If you are interested in becoming a Junior Counselor it is important that you consider carefully the following criteria for yourself:

1. Do you feel you would like to work with sixth grade youngsters?
2. Can you afford to be away from high school for one week?
3. Is your personality such that you are a pleasant person to be around?
4. Can you assume a position of leadership with young people?
5. Are you the type of person to which parents would entrust the care of their children? (Do you have high personal standards?)
6. Do you enjoy the out-of-doors?
7. Do you have an interest in science?

A positive answer to the above criteria should ensure a unique and highly gratifying experience for you, one which cannot be duplicated during your school career.

The final selection of Junior Counselors is made by permanent staff at the Outdoor School site which you will attend during your final two-day workshop. If, in the judgment of the permanent staff, it would be in the best interest of Outdoor School that you not counsel you will be so notified by personal letter. At the conclusion of the two-day workshop all accepted Junior Counselors names will be sent to the appropriate high school where the high school counselor will have the final option on approval. In the event you are not approved by your high school you will be notified.

POLICIES PERTAINING TO JUNIOR COUNSELOR STAFF MEMBERS

Transportation to and from the Outdoor School site is provided by Multnomah Outdoor Education and you are requested to use this transportation. (See bus schedule on Page 8.)

You are expected to remain on the Outdoor School site during your week of attendance as a Junior Counselor. Any exception to this must be cleared with the Site Supervisor.

If you are allowed to smoke in your own home or in public with your parent's knowledge, you may smoke at the Outdoor School. You are however, expected to follow the same rules as apply for any adult staff or teacher. Smoking is allowed only in designated areas or in the dining hall after taps. Smoking is never done in front of students, on the trails, in the cabins, or on the study plots.

No pets allowed on the Outdoor School site.

Liquor and "dope" are absolutely forbidden on-site.

Close human relationships, with an overt display of affection, are discouraged during Outdoor School.

Eleven p.m. should be the close of the day for all Junior Counselors. (Midnight on Thursday evening.)

CLASSROOM VISITATION

Due to conflicts that have arisen when Junior Counselors visit sixth grade classrooms, we are no longer able to endorse classroom visitations. High school students have been missing their own classes to make the visits, and the sixth grade class schedule is disrupted when the visit occurs.

The policy, at this time, is that visits to sixth grade classes by Junior Counselors ARE NOT ALLOWED by Outdoor School.

Please do not try to contact teachers to arrange classroom visits, as they are also aware of this policy.

Visits to children in their homes can sometimes cause problems and are therefore not encouraged by Outdoor School. Junior Counselors may visit children in their homes ONLY with parental invitation or prior parental permission. Please do not make "surprise" home visits. Junior Counselors must not transport children in their cars or in their family car . . . at any time!

Thank you for your help and cooperation in this matter!

SITE VISITATION

After you have counseled for one week at Outdoor School, you might enjoy visiting the site for an evening. Because each week at Outdoor School is a separate week, and very special for those people on-site at that time, we ask that you abide by some visitation rules:

1. Limit your visit to the hours of 6:00 p.m. to 10:00 p.m. and plan to leave the site at 10:00 p.m.

2. Call the site ahead of time to arrange for the visit, bearing in mind that the site is limited to a maximum of 10 Junior Counselors visiting at one time.

3. If your plans change, call the site back and inform them that you will not be visiting.

4. Remember that Junior Counselors can visit on Tuesday and Wednesday nights only.

5. Please abide by all Outdoor School rules by being attentive and quiet at all activities in which you participate....remember that there are other Junior Counselors there who need your support as much as you needed support when you were counseling. Consequently, please don't take part in those activities that should be done by the current group of Junior Counselors.....such as: leading songs at campfire; being guests; 7:00-8:00 p.m. Junior Counselor meeting. Remember, you are a visitor and it is not your week!

6. Bear in mind that it is a regular Outdoor School week and that the staff is glad to see you, but they don't have much spare time to sit and visit.

7. The number of visits each session is at the discretion of the Site Supervisor.

PERMISSION FORMS FOR JUNIOR COUNSELORS

Junior Counselors are required to have a completed permission form on file prior to counseling. This permission form, consisting of 2 copies, must be properly filled out with all the required signatures. One copy is to be on file with Outdoor School personnel and the second copy is to be on file at the student's high school, prior to the assigned week of counseling.

NO JUNIOR COUNSELOR WILL BE ALLOWED TO COUNSEL WITHOUT HAVING FOLLOWED PROPER PROCEDURE REGARDING PERMISSION FORMS.

Permission forms are only available through the faculty contact in your high school. Specific details concerning permission forms will be explained to you at the Junior Counselor Workshop which is held prior to the Outdoor School session.

INSURANCE

The Outdoor School has taken out blanket accident insurance for every Junior Counselor attending the Outdoor School. The insurance benefit limits consist of

Accidental Death $2500, Accidental Dismemberment - subject to maximum of $5000, Medical Injury expense $2500 and Specified Disease $2500. Expenses for eye glasses or prescription for eye glasses and dental x-rays are excluded.

Blanket liability insurance has been purchased to cover all Outdoor School staff members, including participating Junior Counselors. The limit of this policy is $500,000. It is in force all the time the staff member is at the Outdoor School or going directly to or from the Outdoor School.

State Industrial Accident Insurance and Workmen's Compensation Insurance apply only to Senior Counselors and other paid staff members while at the Outdoor School.

CLOTHING AND EQUIPMENT LIST FOR JUNIOR COUNSELORS

BEDDING

Sleeping bag or three-blanket bedroll and sheet
Extra blanket
Pillow and case

CLOTHING

Pajamas
Slippers
Shower thongs
Sturdy shoes
Sturdy boots (waterproof)
Socks
Shirts
Jeans or heavy trousers
Warm jacket
Sweater
Underwear
Gloves
Rain coat, hat, boots

OPTIONAL ITEMS

Musical instrument
Camera and film

TOILET KIT

Bath towels
Hand towels
Wash cloth
Soap and container
Comb/brush
Toothbrush and toothpaste
Lip salve
Facial tissue
Razor

GENERAL EQUIPMENT AND USEFUL ITEMS

Flashlight
Letter writing materials & stamps
Small container of soil from your home (for soil ceremony)
Watch
Alarm clock

The above is only a suggested list for Junior Counselors. Feel free to make any adjustments to the list. Students will not be bringing radios, comics, card games, candy, gum, or money. It would be appreciated if you would follow the same standard.

Thank you!

BUSING SCHEDULE FOR PICK-UP AND DELIVERY OF OUTDOOR SCHOOL JUNIOR COUNSELORS

This bus schedule has been devised to provide more efficient and safer transportation of Junior Counselors to and from the Outdoor School. It will require Junior Counselors to arrange transportation for themselves and their duffel to the nearest high school listed below, on the Sunday they are assigned. Buses will leave the schools PROMPTLY at the time designated. If one is missed the bus may be caught at the next in line or at the Multnomah County Education Service District parking lot, 220 SE 102nd Avenue. As a last resort call 777-7477.

At the Multnomah County Education Service District parking lot, on Sunday, buses will be designated with Outdoor School site names and everyone will reshuffle themselves and their gear to the proper bus. Junior Counselors will arrive at their site between 1:00 p.m. and 1:30 p.m.

On Friday the schedule will work in reverse with buses leaving the Outdoor School sites soon after 2:30 p.m. and arriving at the Education Service District parking lot at 3:30 p.m. and departing for the listed high schools at 4:00 p.m. The buses will arrive at the high schools in REVERSE order of the Sunday pickup, beginning at 4:15 p.m.

BUSING SCHEDULE FOR PICK-UP OF JUNIOR COUNSELORS

A-RUN	LEAVES PROMPTLY AT:
Lake Oswego Sr. High School, 2501 SW Country Club Rd.	10:45 a.m.
Jackson High School, 10625 SW 35th Ave.	11:00 a.m.
Wilson High School, 1151 SW Vermont	11:15 a.m.
Washington High School, 531 SE 14th Ave.	11:30 a.m.
Franklin High School, 5405 SE Woodward	11:45 a.m.
Multnomah County Education Service District, 220 SE 102nd Ave.	12:00 Noon

Arrival at Outdoor School site between 1:00 p.m. and 1:30 p.m.

B-RUN	LEAVES PROMPTLY AT:
Lincoln High School, 1600 SW Salmon	10:45 a.m.
Roosevelt High School, 6941 N Central St.	11:10 a.m.
Grant High School, 2245 NE 36th Ave.	11:30 a.m.
Madison High School, 2735 NE 82nd Ave. --North end of parking lot- corner of 82nd & Siskiyou	11:45 a.m.
Multnomah County Education Service District, 220 SE 102nd Ave.	12:00 Noon

Arrival at Outdoor School site between 1:00 p.m. and 1:30 p.m.

C-RUN	LEAVES PROMPTLY AT:
Corbett High School, Corbett	10:30 a.m.
Gresham High School, 1300 N Main, Gresham	11:00 a.m.
Centennial High School, 3505 SE 182nd Ave., Gresham	11:15 a.m.
Reynolds High School, 1200 NE 201st Ave., Troutdale	11:30 a.m.
Parkrose High School, 11717 NE Shaver	11:45 a.m.
Multnomah County Education Service District, 220 SE 102nd Ave.	12:00 Noon

Arrival at Outdoor School site between 1:00 p.m. and 1:30 p.m.

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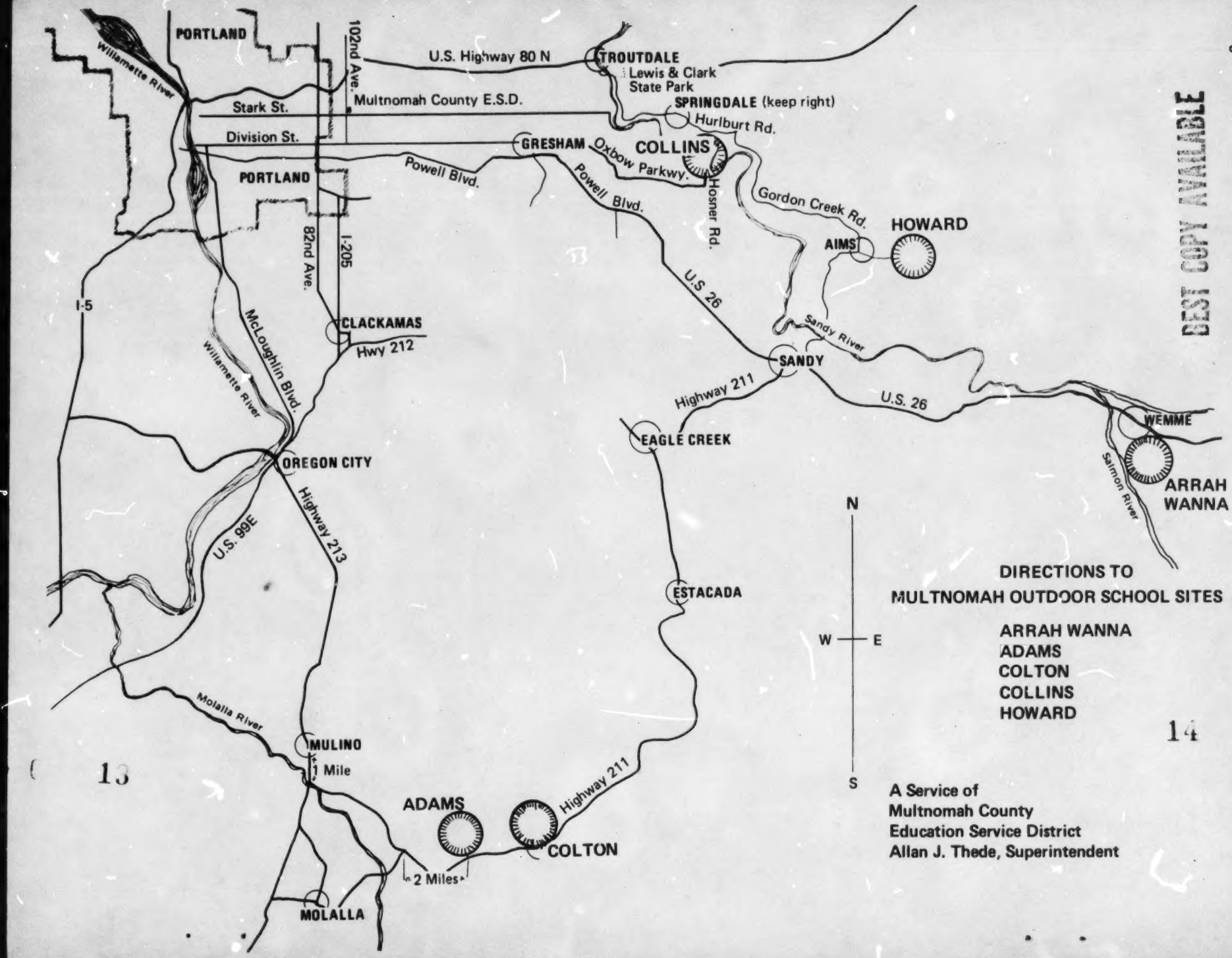

DIRECTIONS TO
MULTNOMAH OUTDOOR SCHOOL SITES

ARRAH WANNA
ADAMS
COLTON
COLLINS
HOWARD

A Service of
Multnomah County
Education Service District
Allan J. Thede, Superintendent

ALL DIRECTIONS ARE FROM THE E.S.D. BUILDING (220 SE 102nd Ave.)

ARRAH WANNA, (approximately 35 miles) PO Box 186, Wemme, OR 97067

Proceed east on Mt. Hood Highway (U.S. #26) through Gresham and Sandy to the town of Wemme. West County buses can probably best take the Banfield Expressway and Highway #80N to Wood Village, turn south to U.S. #26 (Burnside St.) and proceed east to Wemme as above. Immediately after passing the Wemme town limit sign, drivers should take the first turn right, at Hoodland Lumber Company, on Arrah Wanna Blvd. Proceed south .4 mile to large Arrah Wanna entrance sign.

HOWARD, (approximately 25 miles) Route #1, Box 808, Corbett, OR 97019

Proceed east on Stark Street. Stark Street ends when you cross the bridge over the Sandy River (approximately 12½ miles). After crossing the bridge turn right and you will come to the town of Springdale (approximately 2 miles). Swing right at the signal light in Springdale. THIS SIGNAL MAY NOT BE OPERATIONAL. After making this right you will come to a fork in the road (approximately 300 feet). Take the right fork (Hurlburt Road). Proceed on Hurlburt Road to a STOP sign (approximately 2 miles). Turn right at the stop sign. You are now on Gordon Creek Road. Continue on Gordon Creek Road for approximately 9 miles to the town (??) of Aims. KEEP A SHARP LOOKOUT FOR DIRECTION SIGNS IN AIMS. You will note that the main road makes a very sharp turn to the right and a secondary road goes to your left. Turn left on the secondary road (there is a road sign here indicating Howard). After traveling approximately 1 mile you will need to turn right to enter the Howard site. This is marked with a white road sign.

COLLINS, (approximately 16 miles) Route #2, Box 577, Gresham, OR 97030

Travel east on Division Street. East of Gresham, Division Street will become Oxbow Parkway. Stay on Oxbow Parkway until you come to Hosner Road. Turn left on Hosner Road and proceed for approximately 1½ miles. The entrance to the Collins site will be on your left. The sign showing the entrance is on the right hand side of the road. Signs which will aid you in going to Collins will be to note the signs directing you to Oxbow Park. The Collins site is adjacent to Oxbow Park.

ADAMS, (approximately 32 miles) 18798 South Highway #211, Molalla, OR 97038

Proceed south on 82nd Avenue (or Highway #I-205). Exit at the OREGON CITY-GLADSTONE off-ramp. Turn left at the signal light and follow the signs directing you to Molalla (Highway #213). Following Highway #213 you will come to the town of Mulino. Continue past the town of Mulino for approximately 1 mile. Turn left at the sign which indicates UNION MILLS, MEADOWBROOK, AND COLTON (Hwy. #211). THIS TURN IS JUST BEFORE YOU CROSS THE BRIDGE OVER THE MOLALLA RIVER. Approximately 3 miles later you will come to an intersection with stop signs. After stopping you must continue straight ahead. Two miles beyond the stop signs you will see the entrance to the Adams site on your left.

COLTON, (approximately 35 miles) PO Box 116, Colton, OR 97017

Follow the same directions to Adams and continue 2½ miles past the Adams Site, through the town of Colton. The entrance to the Colton site will be seen on the right, at the far end of town.

Daily Schedule

7:00 A.M.	"Wake-Up"
7:20	Chopsticks, Flag & Weather Crews Report
7:40	Morning Colors
7:50	Breakfast
8:30	Daily Duties
8:50	Cabin Clean-Up
9:15	Cabin Inspectors Report - Others Assemble For Resource Study
9:30	Begin Field Study
11:55	Chopsticks Report To Dining Hall
12:00 Noon	End Field Study
12:15 P.M.	Noon Meal
1:00	Quiet Time And Showers
1:55	Assemble For Field Study
2:00	Begin Field Study
4:15	End Field Study
4:20	Cabin Activities With Junior Counselors
4:40	Assemble For Recreation
5:40	End Recreation
5:45	Chopsticks, Flag & Weather Crews Report
6:05	Evening Colors
6:15	Evening Meal
7:00	Resource Review/Teacher-Class Meeting/Resource Preparation/Junior Counselor-Senior Counselor Meeting
8:00	End Meetings (Students Return To Cabins)
8:15	Begin Campfire
9:15	End Campfire (Return To Cabins - Prepare For Bed)
9:40	"Lights Out"
9:45	"End Of Day"
	At conclusion of campfire the Site Supervisor meets with Resource Specialists, Senior Counselors and teachers.

Table Manners

TERMS FOR TABLE MANNERS

BREAKING UP A FRIENDSHIP:	Not passing the salt and pepper together.
MABLE, MABLE, STRONG AND ABLE GET YOUR ELBOWS OFF THE TABLE:	Elbows on table.
FLAG POLE:	Leaving spoon in cereal or dessert bowl.
TRAFFIC JAM:	Not passing things one at a time or so that they meet going opposite directions.
FINGER PAINTING:	Thumbs in bowl or plate while passing.
TABLE DECORATION:	Napkin on table and not on lap.
FLOOR DECORATION:	Napkin on floor.
FULL HOUSE:	Stuffing mouth full of food or talking with food in mouth.
GANG PLANK:	Resting knife on table and edge of plate.
MUDDY FEET:	Placing bowl on used plate.
TIME CHECK:	Silverware not placed at 10 to 4 on plate when meal is finished.
RECKLESS DRIVER:	Not passing food using opposite hand.

When passing food, you should pass to the right the first time around. Once an item has gone around the table it can then be passed either right or left, depending on which is most convenient. Pass food by reaching across your body with opposite hand, take plate, switch hands in front, and pass on with opposite hand.

All meals served at the Outdoor School are prepared by a school dietician and special effort is made to see that they are well balanced. It is hoped that you will eat everything on your plate. Even though there may be some things you do not like, you are to take three bites of everything on your plate.

Don't forget PLEASE and THANK YOU when asking for articles at the table.

Duty Stations

You are responsible to see that you report on time and to the proper place for duties.

When your living group has the duty of:

HOST	Report in front of dining hall at mealtime
HOSTESS	Report in front of dining hall at mealtime
JOHNNY JUMP-UP	Report in front of dining hall at mealtime
CHOPSTICKS	Report to Dining Hall Steward in dining hall at scheduled times before each meal
KITCHEN POLICE	Remain after the meal and report to Dining Hall Steward
FLAG	Report to counselor in charge at the flag pole at scheduled times
WEATHER	Report to counselor in charge at the Weather Station at scheduled times
WOODCHUCK	Report to counselor in charge in front of dining hall after breakfast
ROUSTABOUT	Report to counselor in charge in front of dining hall after breakfast
CABIN INSPECTION	Report to counselor in charge at Outdoor School office

Rules For The Outdoor School

Some behavior guidelines are necessary at the Outdoor School. They are simple, common-sense rules that students should be made to realize are good for everyone. These guidelines are not meant to restrict people from having a pleasurable experience but to insure that everyone can enjoy the Outdoor School equally. Junior Counselors are considered Outdoor School staff members and responsible leaders.

1. Students must not leave the Outdoor School grounds unless accompanied by a staff member. The boundaries are explained at the opening assembly.

2. For the sake of safety and conservation, students must never be allowed to wade in creeks or ponds unless under the supervision of a staff member and for an educational purpose.

3. Experience has shown that whenever youngsters throw rocks, fir cones, etc., someone often ends up on the receiving end. No throwing!

4. Accidents at the Outdoor School are most often caused by running. Students unused to slippery trails, exposed roots and rocks, and other obstacles, simply give the nurse unnecessary business. No running!

5. There is never a need for students to have matches. Pick up all matches and lighters from students on Sunday or whenever detected.

6. Students must not leave their cabin from TAPS at 9:30 p.m. until REVEILLE at 7:00 a.m. (Lavatory use excepted.) Sixth graders need their rest and it is a staff responsibility to see that they get it.

7. Students are to be in their cabins during the quiet time, daily, after the noon meal. Supervised shower time is the exception.

8. Under no circumstances should students remove, injure or destroy living plants or animals. Collecting of scientific specimens under the guidance of a staff member is permitted. Conservation, anti-litter and anti-vandalism are our theme.

9. Should a student become sick or injured they must be made to report to the nurse immediately, day or night. Persons seriously injured or ill should not be moved or made to walk to the nurse's dispensary. The staff member involved must see that the nurse is immediately summoned and guided to the injured. Only the nurse dispenses medications.

10. Everyone is expected to comply with the Outdoor School schedule.

We must all remember that we are guests at the Outdoor School site and conduct ourselves accordingly. Littering the grounds, destroying property, or acting in an obnoxious manner are not the acts of good guests.

IN ALL CASES WHERE SOME MODIFICATION OF BEHAVIOR IS REQUIRED, LET COMMON SENSE BE YOUR GUIDE.

"THINGS TO MAKE"

Lots of fun can be had using homemade medals, bookmarks, and badges as special treats for the children in your cabin. There should be enough for everyone, which means you should take 12 of each item with you to Outdoor School.

BADGES AND MEDALS

HERE'S WHAT --- Smoothly cut-out can covers that have a hole punched near the edge to take the cord or ribbon hanger.

Milk bottle tops or cardboard circles of any size desired. Cardboard tags may be purchased at any stationery store.

Fancy paper from Christmas cards for decorations..silver paper..bits of ribbon for bows..bits of crepe paper for fluting or rulles..wooden buttons..small safety pins..adhesive tape..plaster of Paris..plastic measuring spoon..vaseline.

HERE'S HOW --- Decorate cardboard discs in all sorts of ways.

Punch hole and add a ribbon or cord with small safety pin attached.

Can covers smoothly cut out and decorated with enamel paint make good medals. Decorate with a colored sticker or cut-outs from magazines.

Brush milk bottle tops with paste. When dry, decorate with finger paints or tempera. These make colorful badges or medals.

Cover milk bottle tops with tin foil and use as a badge.

To decorate, cut two identical squares of colored paper a tiny bit larger than the milk bottle top. Slip milk bottle top between the two squares. Fasten each point close to the edge of the bottle top with a stapler. Punch a hole in one point and add a ribbon or cord.

LAPEL PINS

HERE'S HOW --- Fasten a small safety pin to the back of a wooden button with adhesive tape. Decorate the button with enamel paints.

Grease a plastic measuring spoon with vaseline. Cut out a small picture. Wet fingers and smooth picture face down into bowl of spoon.

Pour in plaster of Paris. Place a safety pin in the middle of the plaster of Paris so the button may be pinned to a collar or lapel.

LEAF PLAQUES

Leaf plaques are very popular gifts for other children or older friends. Take a handful of clay and make it into a nice circle or oval, using a can cover as a guide. Press the leaf form into this circle or oval. Put a fine wire hairpin into the edge so it can be hung up when completed. Let the clay dry. Paint and

shellac while leaf is still embedded in the clay. When paint is dry, remove leaf.

A BOOKMARK

HERE'S WHAT --- An old magazine..a small picture..a sheet of heavy paper (a large envelope will provide this)..paste..scissors.

HERE'S HOW --- Select a picture and cut it out. Cut two strips of paper the length you wish for your bookmark. Paste picture at top of one strip. Then cut around the lower half of the picture (as shown by dotted lines in sketch). Paste the first strip of paper on top of second strip, leaving open the place where you cut so that the bottom of the picture will hook over the page. Trim excess paper from top and sides of picture.

HERE'S HOW AND WHEN, Keiser, Armilda B.
Friendship Press. New York, 1963

HOW TO MAKE YOUR CABIN A HOME

THINGS TO TAKE WITH YOU (12 per cabin)

1. Special prizes, awards, gifts, name tag markers.
2. Posters, pictures, butcher paper, and felt pens.
3. Rugs, pillows.

TO DO ON SUNDAY (When you first get your cabin group)

1. Introductions (sharing circle, name tag toss).
2. Decorate cabin.
3. Group makes cabin rules.
4. Explain duty schedule and daily schedule.
   (More cooperation if kids understand expectations).

AT NIGHT

1. Read a story, sing a song.
2. Sharing circle, name tag toss.
3. Tuck them in with a nice comment.

HINTS FOR DISCIPLINE

1. Don't be afraid to say "no".
2. Be sure the child knows the correct behavior and what he/she is doing wrong.
3. Give lots of good feedback for appropriate behavior and down-play the inappropriate behavior.....constant positive reinforcement for your cabin members make them want to act appropriately.

   BE POSITIVE AND ENTHUSIASTIC.....REWARD WITH SMILES, TOUCH, ETC.
4. Don't issue threats....."Do this or I'll...." Children will take you up on them!
5. Give choices, let the children decide how they want to do something. (Always include what you want done in the choices). Let them choose rather than be forced to. A child will always win a direct confrontation or a power struggle.
6. On Sunday, help your cabin members make rules that you can all live by, then enforce the rules fairly and calmly, using peer pressure to assist you. Remind the child of what rule he/she has broken, and then work on the natural consequence of that behavior. A natural consequence is much more effective than a penalty or punishment.

IF YOU HAVE ANY QUESTIONS ABOUT ANYTHING ON THIS PAPER, OR WOULD LIKE ADDITIONAL IDEAS . . . . PLEASE CALL ME AND I'LL BE HAPPY TO TALK WITH YOU.

Diane Millemann
777-7408 or 777-7477

SUGGESTED READING LIST

Sixth grade children like to have stories read to them. On the following pages we have listed some fun books you could read to your cabin group during quiet time or before bed.

NEWBERRY AWARD WINNERS

George, Julie of the Wolves

O'Brien, Mrs. Frisby and the Rats of NIMH

Byars, Summer of the Swans

Armstrong, Sounder

Konigsburg, From the Mixed-Up Files of Mrs. Basil E. Frankweiler

L'Engle, A Wrinkle in Time

O'Deil, Island of the Blue Dolphins

Speare, The Witch of Blackbird Pond

Krumgold, And Now Miguel

Yales, Amos Fortune, Free Man

deAngeli, The Door in the Wall

duBois, The Twenty-One Balloons

Lenski, Strawberry Girl

Lawson, Rabbit Hill

Edmonds, The Matchlock Gun

Sperry, Call it Courage

Dougherty, Daniel Boone

Brink, Caddie Woodlawn

Coatsworth, The Cat Who Went to Heaven

Finger, Tales from Silver Lands

Krumgold, Onion

ADDITIONAL BOOKS

Atwood, Haiku: The Mood of Earth

Blume, Tales of a Fourth Grade Nothing

Chase, The Jack Tales

Folk Tales From the Southeast

Grandfather Tales

Dunning, Reflections on a Gift of Watermelon Pickle.. and Other Modern Verse

Harris, Once Upon a Totem

Northwest Indian Legends

Suggested Reading List (Continued)

Harter, Osceola's Head and Other American Ghost Stories
Hoover, Animals at My Doorstep
Kipling, The Jungle Book
Konigsburg, Altogether, One At a Time
Leach, Whistle in The Graveyard; Folktales to Chill Your Bones
Leslie, Wild Burro Rescue
Mowat, Owls in The Family
Never Cry Wolf
Pearce, The Squirrel Wife
Peck, Wild Cat
Peet, Capyboppy
Roberts, Ghosts and Spectres; Ten Supernatural Stories
Sachs, The Bear's House
Saint-Exupery, The Little Prince
Smith, Kelly's Creek
A Taste of Blackberries
Steig, The Real Thief
Supraner, Think About It, You Might Learn Something
Williams, The Velveteen Rabbit
Zemach, Duffy and The Devil
Hughes, The Iron Giant; A Story in Five Nights
Place, On The Track of Bigfoot
Where The Red Fern Grows
Morey, Home Is The North
Operation Blue Bear
Gentle Ben
Gibson, Old Yeller
Butterworth, Enormous Egg
Fleischman, By The Great Horn Spoon
Baylor, When Clay Sings (Caldecott Award)
The Desert Is Theirs
Chapman, Johnny Appleseed
Swift, Gulliver's Travels
Dahl, Charlie And The Chocolate Factory
Cameron, Fantastic Flight To Mushroom Planet
The Stowaway To The Mushroom Planet

Suggested Reading List (Continued)

Rawls, Where The Red Fern Grows
Eckert, Incident at Hawk's Hill
George, My Side of The Mountain
Robinson, The Best Christmas Pagent Ever
Silverstein, Where The Sidewalk Ends
Rodgers, Freaky Friday
A Billion For Boris
Williams, Petronella
The Adventures of Rattlesnake Ralph

ICEBREAKERS AND GAMES

I. Icebreakers

A. Form a circle, take off a shoe, put it in the center, go grab a shoe and meet the person it belongs to.

B. Hug Tag - Rules in the New Games Book.

C. Mingle (similar to hug tag) - Everyone moves about the room saying mingle until the leader calls out a number. Form groups with the correct number - those left out leave the game.

D. Slow Motion Blob Tag - Rules in the New Game Book.

E. Line Up - Blindfold everyone, give each a number. They must line up in number order without any verbal communication.

F. Sardines - Tie group together with a rope. They must walk around the building but must complete a task before they get back. Example: Count the number of windows, learn everyone's name, etc.

G. Categories - Name two categories. Give each category an animal name. Close eyes and make the noise of the animal and category you fit in.

H. Have a sing-along.

I. Folk dance or square dance.

J. Crazy Baseball - Use a pillow or socks as your ball. Kick item as person runs bases. The opposing team lines up behind the person that gets the ball and passes the ball between their legs and back again to put person out.

K. Write five things on a piece of paper. Match up paper to people. Example: I like best.....fun things I like to do....

L. Play "I've Got a Secret".

M. Name Game - Form circle. First person says his name. Second person says his name and the person before him, etc.

GAMES AND PUZZLES

I. Twenty Questions - Pick an object in the categories: animal, vegetable, mineral. Students ask questions that can be answered yes or no. They must find out object in twenty questions.

II. Charades.

III. Fanny Dooley - Fanny Dooley likes kittens, but she hates cats. Fanny Dooley likes books, but she hates libraries. Students try to make up their own Fanny Dooleys. Secret: Fanny Dooley likes things with double letters. Alligators vs Crocodiles.

IV. Progressive stories - Counselor starts the story and each person in the circle adds on. Example: It was a dark and stormy night. I was sitting at home alone when.....(2nd person) a kitchen sink came flying down the chimney and said.....

V. Mind Games or Riddles

A. Students must solve the story by asking the leader questions that can be answered yes or no. They try to figure out why, where, how, etc.

a. He was afraid to go home because the man with the mask was waiting for him.

Answer: The man is afraid to go home because he is a baseball player on third. The man with the mask is the catcher.

b. John is asleep on the couch. Mary is dead on the floor with broken glass and water around her. The police walk by, see the scene through the window and don't do a thing. Why?

Answer: John is the cat and Mary is a fish.

VI. Puzzles

A. Tell students to do exactly as you do and say. Take a stick and tap the floor as you say, "If you can't do this you can't do much".

Secret: You must clear your throat before you start.

B. Magic Numbers - Get several twigs or pencils. Arrange them in a mysterious manner on the floor. Students try to guess the number they represent.

Secret: The number of fingers you point to the arrangement with, is the number the arrangement represents.

C. Sculpturing (needs two leaders) - One leaves the room. The other uses twigs, pencils to arrange a sculpture of someone in the circle. The leader comesin, looks at the sculpture carefully and identifies correctly the person represented in the sculpture.

Secret: Is not in the arrangement of the twigs. The secret is the sculpturer must sit and mimic the person represented in the sculpture. Students try to guess how the counselors can be so smart!!

D. Black Magic (needs two leaders) - One leader has ESP. Have students pick an object in the room that they want the leader to identify. When the leader returns the other counselor points to objects and asks, "Is it this?"..until the object is identified.

Secret: Just before the correct object is pointed to, the counselor points to something black in color and asks, "Is it this?" The reply is "No". Then the very next object is the correct object - the question is asked, "Is it this?" The reply is "Yes", and the kids are amazed!!

CHILD-MOVER IDEAS

There will be many times during the week when you will find it necessary to move your cabin group or your resource group from place to place.

This can be most difficult if you have not planned how to line them up, and how to actually move them.

So.....to help you keep from tearing your hair out as your group of children race in 6 different directions.....here are LOTS AND LOTS of different ways that you can line up your group of children.

1. By hair color (brown first, blond second, etc.).
2. Eye color (green first, blue second, etc.).
3. Birthdays (all January birthdays first, etc.).
4. School attended (all Boise school first, etc.).
5. Bunks (bunk closest to door first, etc.).
6. Shoe size (size 10 first, etc.).
7. Braces (those who wear braces first, etc.).
8. Glasses (those who wear glasses first, etc.).
9. Brush teeth (those who brushed their teeth this morning first, etc.).
10. Sports (those who play baseball, or football, or basketball go first.... any sport works).
11. Musical instruments (those who play a violin go first....any instrument works).
12. Races (those who tie their shoes the fastest go first in line....a race over any item, such as combing your hair the fastest, etc.).
13. Favorites (those whose favorite food is ice-cream go first....favorite anything works fine, like favorite song, favorite restaurant).
14. Left or right-handed (all left-handed people line up first, etc.).
15. Ages (all 12 year-olds go first, etc.)
16. Number of kids in family (all those who are an only child can go first, etc.).
17. Resource (all those studying animals today can go first, etc.).
18. Alphabetical (all those whose last names begin with "S" go first, etc.)
19. Numbers (the first person who guesses what number I'm thinking of gets to go to the head of the line, etc.).
20. Questions (the person who answers the questions gets to go first in line.... "What is the capital of Oregon?", etc.).

Child-Mover Ideas (Continued)

21. Double jointed (all people who are double jointed go first...).

22. Jobs (each time you move the cabin group, you ask one person what he/she wants to be when he/she grows up, and that person gets to lead the line...).

23. Sections of Portland (those who live in the S.W. go first....).

24. Recreation (those who had archery for recreation yesterday go first....).

25. Height (without talking to each other, have them line themselves up according to height).

26. Bunks (all bunks that were quiet last night go first....).

27. Names (the first person who can remember, without looking at name tags, all the names of the people in the cabin, gets to go first....).

28. Song-leading (the person who leads the cabin group in a song, gets to go first....).

29. Kind of car (anyone whose parents drive a Ford gets to go first....any make or model of car works).

30. Books (the person who tells the cabin about a neat book they just read or their favorite book, gets to go first...).

CABIN-TIME ACTIVITIES

SUNDAY ACTIVITIES

(When you first get your cabin group)

I. Introductions

A. Sharing Circles

1. Share favorite sports, hobbies, TV shows, foods, school subjects.
2. Name tag toss - give students a topic - person with name tag in the center of the circle has the floor. Topics: How do you feel about being here at Outdoor School? What do you expect to happen while you are here?

B. Learning Names

1. First person says his name, second person says his name and the person before him, third person his name, the second, and the first, etc.
2. Make up adjectives that start with the same letter as your name. Example: Super Sally, Crazy Cathy, Happy Henry, etc.
3. Pick someone in the circle and make a guess about the number of brothers or sisters in his/her family, their favorite color, favorite subject, favorite TV show.

II. Decorate The Cabin

A. Put up posters and pictures the counselors have brought from home. (Check a used book store for old nature magazines and for National Geographics for pictures - Camerons on SW 3rd; Powells on Burnside).

B. Draw bunk markers. Get a piece of paper. Have each student write their name in large letters and draw something they like to mark beds.

C. Place rugs or pillows the counselor may have brought, around the cabin.

III. Make cabin rules. Better cooperation if expectations are understood.

IV. Explain Duty Schedule and Daily Schedule.

V. Play ice breaker games (see page 21).

QUIET TIME (Before or after recreation activities)

1. Write letters home.
2. Practive skits or cabin calls.
3. Take showers according to shower schedule at quiet time.
4. Plan field day.
5. Read or tell a story to your cabin group.
6. Name tag toss or sharing circles - favorite part of resource today. (See Sunday activities for more topics).
7. Craft activities.

Quiet Time (Continued)

a. Make centerpieces for dining hall.

b. Obtain butcher paper and crayons. Draw posters or murals to decorate the cabin.

c. Make bunk markers for each child. (See Sunday activities)

d. Make stationery or postcards to write home.

8. Explain duties and schedules.
9. List cabin rules and post in cabin.
10. Flip name tags to the back or tuck inside shirt and see if you can name everyone in your cabin.
11. Play quiet time games.

NIGHT TIME ACTIVITIES

1. Make a deal with your cabin. If everyone is ready and in bed by tatoo, then you will do something special.
2. Read a story or tell a story.
3. Sing a song.
4. Tuck them in with a nice comment.
   a. I'm glad you are in my cabin.
   b. Thanks for doing a great job on.....
   c. I really like the way you.....
5. Do a sharing circle or name tag toss.
6. Play a musical instrument.
7. Set a group goal for the next day. Examples: Super in cabin inspection, early to all duties, etc.

HEALTH, SAFETY, AND EMERGENCY PROCEDURES FOR JUNIOR COUNSELORS

FIRST AID — All first aid will be given by the Nurse.

MEDICINES — All medicines will be kept and given by the Nurse.

ILLNESS/INJURY — The Nurse will see all illnesses and/or injuries.

SERIOUS INJURY OR ILLNESS — Do not move the injured/ill person if:

A. They appear seriously ill/injured or involved in an apparently serious accident or;

B. One or more of the following are present:

1. looks bad
2. severe pain
3. unconsciousness
4. unable to remember accident
5. confused as to who or where they are
6. severe bleeding
7. the person seems dull, "drunk", stumbles when walks, listless

In the above circumstances the most qualified staffer will remain with the victim and give instruction to onlookers. Send 1 person for the Nurse (or 2 students) with the following information:

WHERE TO GO, WHO IS HURT, WHO IS STAYING WITH THEM.

Only the Outdoor School Nurse may call an emergency unit. If the Nurse is not available, this decision will be made by the Site Supervisor.

EPILEPTIC SEIZURE — This is NOT an emergency. Send for the Nurse as you would for a serious illness/injury. Do not have the Nurse paged. While you are waiting for the Nurse DO:

1. remove all objects that might harm the person
2. send curious observers away
3. loosen tight, restrictive clothing such as belts and neckties
4. do not stick anything in their mouths

BEE STINGS — All bee sting victims are to be seen by the Nurse. Before sending the victim to the Nurse check to make sure the stinger is out. If the stinger is still in place remove it with a quick "scraping"/"flicking" motion. Do not pinch the stinger; this will force all of the poison into the victim.

GLOSSARY OF PLANT WORDS

ALGAE	Most primitive form of plant from which all other groups of plants have probably been derived. They vary in size from very small land forms to giant seaweed as long as 150 feet. This is the green material on the side of a fish bowl.
BERRY	Any small juicy and stoneless fruit.
BUSH	Any low shrub with many branches.
FERN	A plant with feather-like leaves which reproduces by spores.
FLOWER	The part of a plant which contains the organs of reproduction from which seeds develop.
FUNGUS	Form of plant life which has no chlorophyll so must obtain its food from other living things.
LICHEN	A plant which consists of two; an algae and a fungus.
MOSS	A primitive plant form that reproduces by spores instead of seeds.
TREE	A plant that usually grows tall and which has a trunk and branches.
ALTERNATE	Leaf pattern....leaves growing first on one side of the stem and then on the other, but not across from one another.
BROAD LEAF	A plant having flat, broad leaves, instead of needles like on pines, firs, etc.
COMPOUND LEAF	Leaf consisting of several leaflets attached to a single leaf stem.
CONIFER	A tree which usually is evergreen and has needle shaped leaves. It is a cone bearing tree.
DECIDUOUS	A plant whose leaves drop off in the fall of the year.
EVERGREEN	A plant which stays green all year.
INTOLERANT	A sun loving plant which does poorly in the shade.
OPPOSITE	Leaf pattern....leaves growing across from one another on a stem.
PALMATE	A leaf arrangement in which several leaflets start from a single point and form a shape like a hand with fingers.
PINNATE	Leaf having leaflets arranged opposite each other on two sides of the stem...like a feather.
SIMPLE LEAF	A leaf which isn't divided.
TEETH	Projections on the edges of leaves which look like teeth.
WHORLS	A circular arrangement of leaves on a stem at one point.
BARK	Protective covering on the outside of a tree or shrub.

Glossary of Plant Words (Continued)

CAMBIUM LAYER	Layer of growing tissue between the bark and the sapwood.
CHLOROPHYLL	The green coloring matter of plants necessary for the plant to make its own food. (Photosynthesis)
CONE	The seed bearing body of such trees as Douglas Fir, Hemlock, Pines, etc.
LOBED	Leaf having deep indentations between the major veins.
GROWTH RINGS	The amount of wood a tree grows in one year.
HEARTWOOD	The inner core of a tree trunk made of nonliving cells which is usually darker than sapwood. Give the tree strength.
LEAF	A green, usually flat part of a plant that grows from the stem or roots and is the place where most photosynthesis takes place.
NEEDLE	A thin, pointed leaf, like that of the Douglas Fir.
PETAL	One of the divisions of a flower which is usually brightly colored.
ROOTS	Part of a plant which usually grows in the ground. It anchors the plant and feeds the plant.
SAP	The liquid inside the trunk of a tree.
SAPWOOD	Soft living part of trunk which contains tubes which carry water and minerals from roots to leaves.
SEED	The reproductive part of a flowering plant which contains the egg cell.
SPORES	One-celled seeds found in plants, like ferns.
STEM	The stalk which supports a leaf, flower, or fruit.
TRUNK	The main stem of a tree.
CARBON DIOXIDE	Gas which we breathe out and the plant takes in during photosynthesis (daytime).
OXYGEN	Colorless gas that is given off by plants during photosynthesis (daytime).
PHOTOSYNTHESIS	The process by which plants used water, CO_2 and sunlight to make food.
BOARD FOOT	Unit of measuring lumber - 12" x 12" x 1".
CIRCUMFERENCE	Measurement around a circle.
D.B.H.	Diameter of tree at breast height (4½ feet).
DIAMETER	Length of a line from one side of a circle to the other through the center.

Glossary of Plant Words (Continued)

COMMUNITY	A group of plants growing in the same area and in the same conditions.
DUFF	Decayed organic matter on top of the soil.
NURSE LOG	Decaying log which provides a seed bed for other plants.
PLANT SUCCESSION	One plant community following another.

TERMS USED IN ANIMAL STUDY

This list is not intended to be used as a dictionary, but rather as an aid to improving your vocabulary before attending Outdoor School. The terms are not in alphabetical order, but are in related groups, each group small enough to be easily learned. In the definitions, the words in CAPITAL LETTERS are important things to remember.

VERTEBRATES	Animals with BACKBONES
INVERTEBRATES	Animals WITHOUT BACKBONES. Some have exoskeletons
EXOSKELETON	The OUTSIDE SKELETON of animals such as insects and crayfish
	VERTEBRATES:
MAMMAL	Warm-blooded vertebrate, HAIR, FEEDS YOUNG ON MILK
BIRD	Warm-blooded vertebrate, FEATHERS, eggs with limey shells
REPTILE	Cold-blooded vertebrate, DRY, SCALY SKIN, (snake, lizard, turtle)
AMPHIBIAN	Cold-blooded vertebrate, SKIN SMOOTH & SLIPPERY (frog, salamander)
	INVERTEBRATES WITH EXOSKELETONS:
INSECT	THREE PART BODY, SIX LEGS, adults usually have wings
SPIDER	TWO PART BODY, EIGHT LEGS, no wings
CENTIPEDE	Exoskeleton in many sections, each section having 2 legs (1 pair)
MILLEPEDE	Exoskeleton in many sections, each section having 4 legs (2 pair)
	INVERTEBRATES WITHOUT EXOSKELETONS:
SNAIL & SLUG	NO SKELETON, SLIMY, ONE LONG FLAT FOOT, with or without shell
EARTHWORM	NO SKELETON, SLIMY, long segmented body, no legs
CARNIVORES	Animals that eat meat
HERBIVORES	Animals that eat plants
OMNIVORES	Animals that eat both meat and plants
PREDATORS	Animals that kill other animals for food
SCAVENGERS	Animals that eat dead and decaying animal and plant life
PARASITES	Animals or plants that obtain food from living organisms
DIURNAL	Most active during daylight hours
NOCTURNAL	Most active at night
HIBERNATE	To spend the winter in a deep sleep usually because of cold
ESTIVATE	To spend the summer in a deep sleep usually because of drought
AQUATIC	Living or growing in water, applied to either plants or animals
TERRESTRIAL	Living or growing on land, either plants or animals
NATIVE	An animal or plant naturally found in this area
EXOTIC	An animal or plant NOT NATIVE to this area (imported)
ENVIRONMENT	All those factors which make up the surroundings of any living thing
HABITAT	The environment in which an animal can exist, providing all of the things that the animal must have, WATER, FOOD, AND SHELTER
CARRYING CAPACITY	The greatest number of animals that can live in an area
LIMITING FACTOR	Whichever of the three essentials, WATER, FOOD, or SHELTER is used up first, thus limiting the carrying capacity

G OSSARY OF SOIL WORDS

PRESERVATION	Not using our natural resources, but leaving them as they are.
CONSERVATION	Wise use of our natural resources so that we save some for future use.
ECOLOGY	The study of how plants and animals live and work together in their surroundings.
ORGANIC	Anything that is living (alive), or has been living (dead).
INORGANIC	Anything that has never been living.
DECOMPOSE	To rot, or to decay.
SOIL	A mixture of decayed organic material and decomposed rock.
DUFF	Top layer of soil, the rotting vegetable material that helps to make new soil.
TOPSOIL	Second layer of soil. Best for plant growth.
SUBSOIL	Third layer of soil.....gives moisture and minerals to plants.
PARENT MATERIAL	Bottom layer of soil....the partly decomposed rocks or sand that help to make new soil.
BEDROCK	The solid rock.....under the four layers of soil.
SOIL PROFILE	A side view of the layers of soil.
SAND	Soil that feels gritty, and does not held together.
SILT	Smooth soil....settles to the bottom of water.
CLAY	Soil that is smooth and sticky.
ALKALINE	Soil that tastes sweet to plants; measures between 7 and 14 on pH scale.
pH	A test that tells what plants you can grow by showing how acid (sour) and alkaline (sweet) the soil is. The soil that tastes sour to plants measures between 1 and 7 on pH scale and is on the acid side.
WEATHERING	The breaking down of rocks and minerals.
EROSION	The wearing away of soil by water or wind.
SHEET EROSION	Washes away the layers of soil.
RILL EROSION	Washes away the soil by water running downhill and making many little streams.
GULLY EROSION	Washes away the soil by water running downhill and making deep, wide ditches.

Glossary of Soil Words (Continued)

BANK EROSION	Erosion is caused by streams washing away the soil from stream banks.
SPLASH EROSION	Is caused by raindrops hitting bare soil.
GROUND COVER	Grasses, plants, shrubs, or trees preventing the soil from being worn away by wind or water.
STRIP CROPPING	Planting rows of different crops to hold the soil together against erosion.
CONTOUR PLOWING	Plowing across a hill, instead of straight up and down to prevent erosion.
TERRACING	Plowing across a hill and making stairs out of the soil to prevent erosion.

GLOSSARY OF WATER WORDS

AMPHIBIAN	Means "living in two places". These animals hatch from eggs which have been deposited in ponds or streams. They live in the water like fish when they are young. Gradually they grow lungs and legs, breathe air, and live on land.
ANADROMOUS FISH	Those fish which spend the greater part of their lives in salt-water, but migrate into fresh-water streams for reproduction.
AQUATIC	Living or growing in water.
AQUATIC ROOTS	Roots that are in the water. They are generally small and lack root hairs.
ARTESIAN WELL	A deep well in which water rises by subsurface (under the ground) pressure.
CAPILLARY WATER	Water held in the fine spaces around soil particles. This water can be used by plants.
CONDENSATION	The process by which water vapor changes to liquid water, usually minute water droplets forming clouds.
CUBIC FEET PER SECOND	A measurement we use to find out how much water is flowing past a certain point every second. A water flow of one cubic foot per second would be about 449 gallons every minute.
CUBIC FOOT OF WATER	The water in a container that is one foot wide, one foot deep and one foot long. One cubic foot of water is about 7½ gallons and weighs 62.4 pounds.
DISSOLVED OXYGEN	The useable oxygen dissolved in the water. It is measured in "parts per million" and is essential to aquatic life. (P.P.M.)
EROSION	The washing away or wearing away of the land surface. Flowing water often makes gullies in the soil.
EVAPORATION	The changing of water into vapor; from a liquid to a gas. Action of the sun warming land and water surfaces.
GRAVITATIONAL WATER	Water that moves downward into the zone of ground water. Water stored in underground streams, caverns, and the air spaces in the soil.
GROUND WATER	Water that collects in the ground, concentrating at and below the water table.
HARD WATER	Water containing mineral salts which combine with soap and prevent suds from forming.
HYDROSCOPIC WATER	Water which forms a thin film around soil particles. This water cannot be used by plants.
pH	A measure of the concentration of hydrogen ions. More simply, it tells us whether the water is acid or alkaline.
POLLUTION	Caused by dumping wastes into our water. These wastes may cause water to be unuseable.

PRECIPITATION	Moisture falling from clouds or separating from the air such as rain, snow, sleet, hail, frost, fog, or dew.
RESERVOIR	A place where water is collected and stored for use, usually related to a man-made structure such as a pond or lake behind a dam.
RIFFLE	A shallow area in a stream bottom that causes the water flowing over it to become broken and uneven in flow.
RUNOFF	Excess water which the ground cannot absorb and which runs off the surface of the ground to enter the drainage system, streams and rivers.
SEDIMENT	Any material carried in suspension in water which will settle out as the speed of the water flow lessens.
SOFT WATER	Water relatively free from minerals.
SPRING	Formed by ground water coming to the surface on top of an impervious layer.
SURFACE WATER	Runoff and also where the water table emerges at the surface of the ground in lakes and streams.
SWAMP	An area of low ground, saturated with water over a long period.
TOXIC	Poisonous. In water it is usually associated with a waste which kills fish and other aquatic life.
TRANSPIRATION	The process by which plants release water into the air from their leaves and other surfaces. This loss is by evaporation.
WASTES	Sewage, water from industrial processes, return irrigation water, or any other water which has been used by man and changed in the process.
WATERSHED	Any area of land which drains into a particular stream or other body of water. A drainage basin.
WATERTABLE	The height at which free water occurs in the soil profile, and as surface water in streams and lakes.